UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,789	01/22/2001	Chengwen Robert Chu	343355600020	8356

7590   01/04/2005

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EXAMINER
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ART UNIT	PAPER NUMBER
2167	

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE f this c mmunication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 January 2001</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-63</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-5,7-38 and 40-63</u> is/are rejected.

7)☐ Claim(s) <u>6 and 39</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>22 January 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

2.   Claims 1-5, 7-13, 16, 17, 20-23, 25, 26, 30-33, 34-38, 40-47, 50, 51, 54,

55, 57, 58, 61, and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Sang'udi et al. (U.S. Patent No. 6,480,194) and Anwar (U.S. Patent No. 6,750,864).

3.   Sang'udi renders obvious independent claims 1 and 34 by the following:

"...a computer data store for storing input data that has dimension variables..." at col.

12, lines 13-16, col. 5, lines 49-51, and col. 9, lines 25-27.

"...connected to the data store..." at col. 12, lines 13-16.

"...the input data..." at col. 5, lines 49-51.

"...and a multi-dimension viewer..." at col. 9, lines 25-30.

Sang'udi does not teach the use of target variables, decision trees, splitting data, dimension variable subsets, and producing reports.

4.   However, Anwar teaches the use of target variables, decision trees, splitting data, dimension variable subsets, and producing reports as follows:

"...and at least one target variable..." at col. 48, lines 13-26.

"...a decision tree processing module..." at col. 3, lines 10-17.

"...that determines a subset of the dimension variables for splitting..." at col. 44, lines 31-34, col. 36, lines 19-23, and col. 20, lines 38-41.

"...wherein the splitting by the dimension variable subset..." at col. 20, lines 38-41, col. 36, lines 19-23, and col. 44, lines 31-34.

"...predicts the target variable..." at col. 5, lines 59-67, col. 6, line 1, and col. 48, lines 13-26.

"...that generates a report..." at col. 10, lines 12-17 and col. 48, lines 19-20.

"...using the determined dimension variables subset..." at col. 36, lines 19-23 and col. 44, lines 31-34.

"...and the splitting of the dimension variables..." at col. 20, lines 38-41 and col. 36, lines 19-23.

It would have been obvious to one of ordinary skill at the time of the invention to combine Anwar with Sang'udi to provide splitting algorithms for decision trees in order to determine a set of candidate splits, to use split criteria to determine the best split among candidate splits, and to provide user with a simplified view of the data. Likewise,

it would have been obvious to one of ordinary skill at the time of the invention to

combine Anwar with Sang'udi to provide target variables in order to use as inputs to the

splitting algorithms for decision trees and to generate reports in order to assist the user

in viewing the subsets of data. Sang'udi and Anwar teach the use of related systems.

They teach the use of computers, the use of databases, the use of networks, the use of

multiple dimensions, the use of dimension variables, the use of targets, the use of

objects, and the displaying of information.

     5.   As per claims 2 and 35, the "...dimension variables subset...," is taught by

Anwar at col. 36, lines 19-23 and col. 44, lines 31-34

and the "...includes continuous variables...," is taught by Anwar at col. 35, lines 18-21.

     6.   As per claims 3 and 36, the "...dimension variables subset...," is taught by

Anwar at col. 36, lines 19-23 and col. 44, lines 31-34

and the "...includes category-based variables...," is taught by Anwar at col. 1, lines 29-

34.

     7.   As per claims 4 and 37, the "...selector module so that a user can alter...,"

is taught by Sang'udi at col. 6, lines 10-11 and col. 13, lines 60-62

and the "...which dimension variables to include in the subset...," is taught by Anwar at

col. 36, lines 19-23 and col. 44, lines 31-34.

     8.   As per claims 5 and 38, the "...at least one statistic measure is provided to

the user...," is taught by Anwar at col. 12, lines 41-45,

the "...that is indicative of how well the splitting of the dimension variables...," is taught

by Anwar at col. 19, lines 28-31, col. 20, lines 38-41, and col. 36, lines 19-23,

and the "...predicts the target variable...," is taught by Anwar at col. 5, lines 59-67, col. 6, line 1, and col. 48, lines 13-26.

9.   As per claims 7 and 40, the "...selector module so that a user can alter values...," is taught by Sang'udi at col. 6, lines 10-11 and col. 13, lines 60-62,

the "...at which the input data...," is taught by Sang'udi at col. 5, lines 13-16,

and the "...is split by the decision tree processing module...," is taught by Anwar at col. 20, lines 38-41 and col. 3, lines 10-17.

10.   As per claims 8 and 41, the "...input data set...," is taught by Sang'udi at col. 5, lines 13-16 and col. 6, lines 3-6,

the "...includes a plurality of dimension variables...," is taught by Sang'udi at col. 4, lines 61-64,

and the "...and a single target variable...," is taught by Anwar at col. 48, lines 13-26.

11.   As per claims 9 and 42, the "...input data set...," is taught by Sang'udi at col. 5, lines 13-16 and col. 6, lines 3-6,

the "...includes a plurality of dimension variables...," is taught by Sang'udi at col. 4, lines 61-64,

and the "...and a plurality of target variables...," is taught by Anwar at col. 48, lines 13-26.

12.   As per claims 10 and 44, the "...decision tree processing module splits...," is taught by Anwar at col. 3, lines 10-17 and col. 20, lines 38-41,

the "...input data into groups...," is taught by Sang'udi at col. 8, lines 13-16 and col. 14, lines 30-33,

the "...wherein the mufti-dimension viewer...," is taught by Sang'udi at col. 9, lines 25-30,

and the "...generates a report using the groups...," is taught by Anwar at col. 10, lines 12-17, col. 48, lines 19-20, and col. 14, lines 29-30.

13.   As per claims 11 and 45, the "...decision tree processing module...," is taught by Anwar at col. 3, lines 10-17,

the "...uses a competing initial splits approach...," is taught by Anwar at col. 20, lines 38-44 and col. 44, lines 1-4,

and the "...to determine a subset of the dimension variables...," is taught by Anwar at col. 44, lines 31-34 and col. 36, lines 19-23.

14.   As per claims 12 and 46, the "...initial split variable...," is taught by Anwar at col. 41, lines 1-4 and col. 20, lines 38-44,

the "...is indicated as most important variable...," is taught by Anwar at col. 23, lines 2-4 and col. 18, lines 31-34,

and the "...in predicting the target variable...," is taught by Anwar at col. 5, lines 59-67, col. 6, line 1, and col. 48, lines 13-26.

15.   As per claims 13 and 47, the "...second split variable...," is taught by Anwar at col. 16, lines 37-39 and col. 20, lines 38-44,

the "...is indicated as second most important variable...," is taught by Anwar at col. 16, lines 37-39, col. 23, lines 2-4, and col. 18, lines 31-34,

and the "...in predicting the target variable...," is taught by Anwar at col. 5, lines 59-67, col. 6, line 1, and col. 48, lines 13-26.

16.   As per claims 16 and 50, the "…generated report is viewed…," is taught

by Anwar at col. 10, lines 12-17, col. 48, lines 19-20, and col. 11, lines 45-47,

the "…substantially adjacent to the dimension variables subset…," is taught by Anwar at

col. 10, lines 43-48, col. 36, lines 19-23, and col. 44, lins 31-34,

and the "…and the splitting values of the dimension variables subset…," is taught by

Anwar at col. 21, lines 9-13, col. 36, lines 19-23, and col. 44, lins 31-34.

17.   As per claims 17 and 51, the "…report has a format…," is taught by Anwar

at col. 48, lines 19-20 and col. 48, lines 45-48,

the "…selected from the group consisting of a textual report format…," is taught by

Anwar at col. 48, lines 6-8, col. 48, lines 19-20, and col. 48, lines 45-48,

the "…tabular report format…," is taught by Anwar at col. 27, lines 1-2, col. 48, lines 19-

20, and col. 48, lines 45-48,

the "…graphical report format…," is taught by Anwar at col. 16, lines 34-37, col. 48,

lines 19-20, and col. 48, lines 45-48,

and the "…and combinations thereof…," is taught by Anwar at col. 7, lines 60-67.

18.   As per claims 20 and 54, the "…user selects a type of summary

statistics…," is taught by Anwar at col. 7, lines 47-51, col. 10, lines 17-18, and col. 12,

lines 36-38,

the "…to view the determined dimension variables subset…," is taught by Anwar at col.

10, lines 11-16, col. 36, lines 19-23, and col. 44, lines 31-34,

and the "…and the splitting of the dimension variables…," is taught by Anwar at col. 21,

lines 9-13 and col. 36, lines 19-23.

19.   As per claims 21 and 55, the "...model repository for storing a model...," is

taught by Anwar at col. 32, lines 9-12 and col. 7, lines 46-55,

the "...that contains the dimension variables...," is taught by Sang'udi at col. 4, lines 61-

64,

and the "...and splitting values of the dimension variables...," is taught by Anwar at col.

20, lines 57-60 and col. 36, lines 19-23.

20.   As per claim 22, the "...decision tree processing module splits...," is

taught by Anwar at col. 3, lines 10-17 and col. 20, lines 38-41,

the "...input data...," is taught by Sang'udi at col. 5, lines 13-16,

the "...into a first set of groups...," is taught by Anwar at col. 15, lines 22-25, col. 9, lines

57-60, and col. 14, lines 29-32,

the "...according to first splitting rules to form a first model...," is taught by Anwar at col.

15, lines 22-25, col. 20, lines 38-41, col. 37, lines 27-30, and col. 7, lines 46-55,

the "...wherein the decision tree processing module splits...," is taught by Anwar at col.

3, lines 10-17 and col. 20, lines 38-41,

the "...different input data...," is taught by Sang'udi at col. 5, lines 13-16,

the "...into a second set of groups...," is taught by Anwar at col. 15, lines 22-25, col. 9,

lines 57-60, and col. 14, lines 29-32,

the "...according to second splitting rules to form a second model...," is taught by Anwar

at col. 15, lines 22-25, col. 20, lines 38-41, col. 37, lines 27-30, and col. 7, lines 46-55,

the "...wherein the model repository...," is taught by Anwar at col. 32, lines 9-12 and col.

7, lines 46-55,

the "...includes a splitting rules index...," is taught by Anwar at col. 20, lines 38-41, col.

37, lines 27-30, and col. 22, lines 34-37,

and the "...to store which splitting rules are used with which model...," is taught by

Anwar at col. 32, lines 9-12, col. 20, lines 38-41, col. 37, lines 27-30, and col. 7, lines

46-55.

21.   As per claim 23, the "...splitting rules index...," is taught by Anwar at col.

20, lines 38-41, col. 37, lines 27-30, and col. 22, lines 34-37,

the "...is searched in order to locate a model...," is taught by Anwar at col. 36, lines 1-2

and col. 7, lines 46-55,

and the "...stored in the model repository...," is taught by Anwar at col. 32, lines 9-12

and col. 7, lines 46-55.

22.   As per claims 25 and 57, the "...search request is provided over a

computer network...," is taught by Anwar at col. 36, lines 1-2 and col. 32, lines 19-21,

the "...to retrieve the first model...," is taught by Anwar at col. 38, lines 1-2, col. 15, lines

22-25, and col. 7, lines 46-55,

and the "...from the model repository...," is taught by Anwar at col. 32, lines 9-12 and

col. 7, lines 46-55.

23.   As per claims 26 and 58, the "...computer network is an Internet

network...," is taught by Sang'udi at col. 12, lines 38-40.

24.   As per claims 30 and 61, the "...data mining application...," is taught by

Anwar at col. 5, lines 42-47,

the "...provides construction of a process flow diagram...," is taught by Anwar at col. 5,

lines 59-67, col. 6, line 1, col. 24, lines 26-28, col. 37, lines 31-33, and col. 46, lines 12-

17,

the "...wherein the process flow diagram includes nodes...," is taught by Anwar at col.

24, lines 26-28, col. 37, lines 31-33, col. 46, lines 12-17, and col. 21, lines 9-14,

the "...representative of the input data...," is taught by Sang'udi at col. 5, lines 13-16,

and the "...and a variable configuration module...," is taught by Anwar at col. 12, lines

13-21.

26.   As per claims 31 and 62, the "...activated variable configuration module

node...," is taught by Anwar at col. 47, lines 8-10, col. 12, lines 13-21, and col. 20, lines

57-60,

the "...provides a graphical user interface...," is taught by Anwar at col. 5, lines 42-47,

the "...within which a user can alter...," is taught by Sang'udi at col. 6, lines 10-11 and

col. 13, lines 60-62,

the "...which dimension variables to include in the subset...," is taught by Anwar at col.

36, lines 19-25 and col. 44, lines 31-44.

26.   As per claim 32, the "...process flow diagram...," is taught by Anwar at col.

24, lines 26-28, col. 37, lines 31-33, and col. 46, lines 12-17,

the "...further includes a node representative of the decision tree processing module...,"

is taught by Anwar at col. 21, lines 9-14,

the "...that has a competing initial splits approach...," is taught by Anwar at col. 20, lines

38-44 and col. 21, lines 9-14,

and the "...for determining the subset of the dimension variables...," is taught by Anwar

at col. 44, lines 31-44 and col. 36, lines 19-25.

27.   As per claim 33, the "...process flow diagram...," is taught by Anwar at col.

24, lines 26-28, col. 37, lines 31-33, and col. 46, lines 12-17,

the "...further includes a node representative of the decision tree processing module...,"

is taught by Anwar at col. 21, lines 9-14,

the "...that has a non-competing initial splits approach...," is taught by Anwar at col. 22,

lines 5-7 and col. 21, lines 9-14,

and the "...for determining the subset of the dimension variables...," is taught by Anwar

at col. 44, lines 31-44 and col. 36, lines 19-25.

28.   As per claim 43, the "...using a decision tree algorithm...," is taught by

Anwar at col. 3, lines 10-17,

the "...to determine the subset of the dimension variables by which to split...," is taught

by Anwar at col. 21, lines 9-14, col. 41, lines 31-44, and col. 20, lines 38-41,

and the "...input data...," is taught by Sang'udi at col. 8, lines 13-16.

29.   Claims 14, 15, 48, and 49 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Sang'udi and Anwar as applied to the claims above, and further in

view of Chickering (U.S. Patent No. 6,505,185).

As per claims 14 and 48, the "...decision tree processing module...," is taught by

Anwar at col. 3, lines 10-17,

the "...of the input data...," is taught by Sang'udi at col. 8, lines 13-16,

but the "...generates binary splits...," is not taught by either Sang'udi or Anwar.

However, Chickering teaches the use of binary splits as follows:

"...Specifically, the binary split is considered that corresponds
to the intervals (low, m) and [m, high), where m is the mean
value for X in the training data that is relevant to L..." at col.
7, lines 42-44.

It would have been obvious to one of ordinary skill at the time of the invention to

combine Chickering with Sang'udi and Anwar to provide binary splits in order provide

two data sets with one set with values less than a specified value and the other set with

values greater than or equal to that value to assist the user in visualizing the data.

Sang'udi, Anwar, and Chickering teach the use of related systems. They teach the use

of computers, the use of networks, the use of multiple dimensions, the use of dimension

variables, the use of targets, the use of objects, and the displaying of information and

Anwar and Chickering teach the use decision trees.

30.   As per claims 15 and 49, the "...decision tree processing module

generates splits...," is taught by Anwar at col. 3, lines 10-17 and col. 28, lines 38-41,

the "...of the input data...," is taught by Sang'udi at col. 8, lines 13-16,

and the "...that are other than binary splits...," is taught by Chickering at col. 8, col. 25-

34.

31.   Claims 18, 19, 27, 28, 52, 53, 59 and 60 are rejected under 35

U.S.C. 103(a) as being unpatentable over Sang'udi and Anwar as applied to the claims

above, and further in view of Chaudhuri et al. (U.S. Patent No. 6,212,526).

As per claims 18 and 52, the "...selects one of the report formats in order to

view...," is taught by Anwar at col. 7, lines 45-46, col. 48, lines 19-20, col. 7, lines 21-25,

and col. 11, lines 45-47,

the "...determined dimension variables subset...," is taught by Anwar at col. 36, lines

19-25 and col. 44, lines 31-44,

the "...and the splitting of the dimension variables...," is taught by Anwar at col. 21, lines

9-14,

but the "...marketing analyst...," is not taught by either Sang'udi or Anwar.

However, Chaudhuri teaches having marketing analysts as users as follows:

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"...Using human experts such as statisticians or domain experts
(such as data analysts, engineers, or marketing experts) to
build classifiers based on existing data is expensive and may
not be accurate especially for problems involving large data
sets that have a multitude of fields..." at col. 1, lines 60-64.
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It would have been obvious to one of ordinary skill at the time of the invention to

combine Chaudhuri with Sang'udi and Anwar to have marketing analysts to use the

system in order provide a means marketing analysts to view large volumes of data in a

meaningful manner. Sang'udi, Anwar, and Chaudhuri teach the use of related systems.

They teach the use of computers, the use of databases, the use of networks, the use of

multiple dimensions, the use of targets, the use of objects, and the displaying of

information and Anwar and Chaudhuri teach the use decision trees.

32.   As per claims 19 and 53, the "...input data includes more than fifty

dimension variables...," is taught by Sang'udi at col. 5, lines 49-51 and col. 9, lines 25-

30,

the "...wherein the determined dimension variables subset includes less than seven

dimension variables that are viewed...," is taught by Anwar at col. 36, lines 19-25, col.

44, lines 31-44, and col. 11, lines 45-47,

and the "...by the marketing analyst....," is taught by Chaudhuri at col. 1, lines 60-64.

33.   As per claims 27 and 59, the "...model repository...," is taught by Anwar at

col. 32, lines 9-12 and col. 7, lines 46-55,

the "...includes a plurality of specialty splitting rules indices...," is taught by Chaudhuri

at col. 1, lines 60-64, col. 7, lines 25-29, col. 18, lines 6-10, and col. 11, lines 55-58,

and the "...that are used to locate a model stored in the model repository...," is taught

by Anwar at col. 24, lines 64-67, col. 32, lines 9-12, and col. 7, lines 46-55.

34.   As per claims 28 and 60, the "...specialty splitting rules indices are

indices...," is taught by Chaudhuri at col. 1, lines 60-64, col. 7, lines 25-29, col. 18, lines

6-10, and col. 11, lines 55-58,

the "...selected from the group consisting of marketing specialty splitting rules

indices...," is taught by Chaudhuri at col. 1, lines 60-64, col. 7, lines 25-29, col. 18, lines

6-10, and col. 11, lines 55-58,

the "...sales specialty splitting rules indices...," is taught by Anwar at col. 16, lines 28-

32, col. 20, lines 38-41, col. 37, lines 27-30, and col. 22, lines 34-37,

and the "...and combinations thereof...," is taught by Anwar at col. 7, lines 60-67.

35.   Claims 24 and 56 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Sang'udi and Anwar as applied to claims 1 and 34 above, and further

in view of Lawler et al. (U.S. Patent No. 5,930,798).

As per claims 24 and 56, the "...model repository...," is taught by Anwar at col.

32, lines 9-12 and col. 7, lines 46-55,

the"...diagram level storage means...," is taught by Anwar at col. 46, lines 12-17, col.

12, lines 36-38, and col. 32, lines 9-12,

the "...and a model level storage means...," is taught by Anwar at col. 7, lines 46-55,

col. 12, lines 36-38, and col. 32, lines 9-12,

the "...for storing the first and second models...," is taught by Anwar at col. 32, lines 9-

12 and col. 7, lines 46-55,

but the "...includes a project level storage means...," is not taught by either Sang'udi or

Anwar.

However, Lawler teaches the use of project levels as follows:

"...A further complication is that project level forecasts
frequently require data obtained from different software tools..."
at col. 1, lines 52-54.

It would have been obvious to one of ordinary skill at the time of the invention to

combine Lawler with Sang'udi and Anwar to use a project level in order to provide a

means of preparing project level forecasts. Sang'udi, Anwar, and Lawler teach the use

of related systems. They teach the use of computers, the use of databases, the use of

networks, the use of objects, and the displaying of information, and Anwar and Lawler

teach the use of models and using the models for making decisions.

36.   Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Sang'udi and Anwar as applied to claim 1 above, and further in view of Brown

("Indexing HTML files").

As per claim 29, the "...model repository...," is taught by Anwar at col. 32, lines

9-12 and col. 7, lines 46-55,

the "...with a connection to the splitting rules index...," is taught by Anwar at col. 20,

lines 38-41, col. 37, lines 27-30, and col. 22, lines 34-37,

but the "...includes a mini-index means...," is not taught by either Sang'udi or Anwar.

However, Brown teaches the use of mini-indexes as follows:

"...You could do the same thing in HTML by coding the common entry
to point to a "mini-index" of the topics associated with it..." at
paragraph 6.

It would have been obvious to one of ordinary skill at the time of the invention to

combine Brown with Sang'udi and Anwar to use mini-indexes in order to provide a

quick-search capability for the tree-type index and gain wider acceptance of the system.

37.   Claim 63 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Anwar (U.S. Patent No. 6,750,864), Sang'udi et al. (U.S. Patent No. 6,480,194), and

Thomas (U.S. Patent No. 6,490,719).

38.   Anwar renders obvious independent claim 63 as follows:

"...and target variables..." at col. 48, lines 13-26.

"...receiving a request..." at col. 39, lines 44-50.

"...after receiving the request..." at col. 39, lines 44-50.

"...determining a subset of the dimension variables for splitting..." at col. 44, lines 31-

34, col. 36, lines 19-23, and col. 20, lines 38-41.

"...wherein the splitting using the dimension variable subset..." at col. 20, lines 38-41,

col. 44, lines 31-34, and col. 36, lines 19-23.

"...predicts the target variable..." at col. 5, lines 59-67, col. 6, line 1, and col. 48, lines

13-26.

"...displaying the determined dimension variables subset and the dimension

variables..." at col. 5, lines 59-67, col. 6, line 1, col. 36, lines 19-23, and col. 44, lines

31-34.

"...can alter which of the dimension variables are included in the dimension variables

subset..." at col. 29, lines 51-56, col. 36, lines 19-23, and 44, lines 31-34.

"...and generating a report..." at col. 10, lines 12-17 and col. 48, lines 19-20.

"...using the dimension variables subset as altered..." at col. 36, lines 19-23, 44, lines

31-34, and col. 29, lines 51-56.

"...whereby the generated report..." at col. 10, lines 12-17 and col. 48, lines 19-20.

"...is used for multi-dimension data analysis..." at col. 8, lines 20-22.

Anwar does not teach the use of input data and non-technical personnel.

39.   However, Sang'udi teaches the input of data as follows:

"...storing input data that has dimension..." at col. 12, lines 13-16, col. 5, lines 49-51,

and col. 9, lines 25-27.

"...to analyze the stored input data..." at col. 14, lines 19-22, col. 12, lines 13-16, and

col. 5, lines 49-51.

"...the input data..." at col. 5, lines 49-51.

It would have been obvious to one of ordinary skill at the time of the invention to

combine Sang'udi with Anwar to provide input data in order to have a source of data for

large data sets to be used for the on-line analytical processing of data. Anwar and

Sang'udi teach the use of related systems. They teach the use of computers, the use

of databases, the use of networks, the use of multiple dimensions, the use of

dimension variables, the use of targets, the use of objects, and the displaying of

information.

Sang'udi does not teach the use of the system by non-technical personnel.

40.   However, Thomas teaches the use of a system by non-technical

personnel as follows:

"...from the non-technical individual..." at col. 26, lines 21-24.

"...so that the non-technical individual..." at col. 26, lines 21-24.

"...for the non-technical personnel..." at col. 26, lines 21-24.

"...by the non-technical individual..." at col. 26, lines 21-24.

"...by the non-technical individual..." at col. 26, lines 21-24.

It would have been obvious to one of ordinary skill at the time of the invention to

combine Thomas with Anwar and Sang'udi to allow non-technical personnel to use the

system in order to enhance the usability of the system and provide additional analysis

tools to the non-technical personnel. Anwar, Sang'udi, and Thomas teach the use of

related systems. They teach the use of computers, the use of databases, the use of

networks, the use of targets, the use of objects, the use of models, and the displaying

of information and Anwar and Thomas teach the use of decision trees.

Allowable Subject Matter

41.   Claims 6 and 39 are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims. The use of logworth statistic

measures is not taught in the prior art.

Conclusion

42.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harold E. Dodds, Jr. whose telephone number is (571)-272-4110. The examiner can normally be reached on Monday - Friday 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (571)-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Harold E. Dodds, Jr.
Patent Examiner
December 20, 2004

GRETA ROBINSON
PRIMARY EXAMINER